be serviced routinely or that is liable to wear or damage must be readily accessible in the installed position(s) recommended by the manufacturer.

(2) To avoid interference with the BWMS, every access of the BWMS beyond the essential requirements, as determined by the manufacturer, must require the breaking of a seal, and, where possible for the purpose of maintenance, activate an alarm.

(3) Simple means must be provided aboard the vessel to identify drift and repeatability fluctuations and re-zero measuring devices that are part of the control and monitoring equipment.

(f) Each BWMS must be designed so that it does not rely in whole or in part on dilution of ballast water as a means of achieving the ballast water discharge standard as required in 33 CFR part 151, subparts C or D.

(g) Adequate arrangements for storage, application, mitigation, monitoring (including alarms), and safe handling must be made for all BWMS that incorporate the use of, produce, generate, or discharge a hazardous material, active substance, preparation and/or pesticide in accordance with Coast Guard regulations on handling/storage of hazardous materials (33 CFR part 126) and any other applicable Federal, State, and local requirements.

(h) For any BWMS that incorporates the use of or generates active substances, preparations, or chemicals, the BWMS must be equipped with each of the following, as applicable:

(1) A means of indicating the amount and concentration of any chemical in the BWMS that is necessary for its effective operation.

(2) A means of indicating when chemicals must be added for the proper continued operation of the BWMS.

(3) Sensors and alarms in all spaces that may be impacted by a malfunction of the BWMS.

(4) A means of monitoring all active substances and preparations and relevant chemicals in the treated discharge.

(5) A means to ensure that any maximum dosage or maximum allowable discharge concentration of active substances and preparations is not exceeded at any time.

(6) Proper storage of each chemical defined as a hazardous material in 49 CFR 171.8 that is specified or provided by the manufacturer for use in the operation of a BWMS. Each such chemical that is stowed onboard must be labeled and stowed in accordance with the procedures in 46 CFR part 147.

§ 162.060–22 Marking requirements.

(a) Each ballast water management system (BWMS) manufactured under Coast Guard approval must have a nameplate which is securely fastened to the BWMS and plainly marked by the manufacturer with the information listed in paragraph (b) of this section.

(b) Each nameplate must include the following information:

(1) Coast Guard approval number assigned to the BWMS in the certificate of approval.

(2) Name of the manufacturer.

(3) Name and model number of the BWMS.

(4) The manufacturer's serial number for the BWMS.

(5) The month and year of manufacture completion.

(6) The maximum allowable working pressure for the BWMS.

(c) The information required by paragraph (b) of this section must appear on a nameplate attached to, or in lettering on, the BWMS. The nameplate or lettering must be capable of withstanding the combined effects of normal wear and tear and exposure to water, salt spray, direct sunlight, heat, cold, and any substance used in the normal operation and maintenance of the BWMS without loss of readability. The nameplate must not be obscured by paint, corrosion, or other materials that would hinder readability.

[USCG–2001–10486, 77 FR 17311, Mar. 23, 2012, as amended by 77 FR 33970, Jun. 8, 2012]

§ 162.060–24 Test Plan requirements.

(a) The Coast Guard requires Test Plans for land-based, shipboard, and component testing conducted to meet the requirements of §§ 162.060–26, 162.060–28 and 162.060–30 of this subpart, respectively. Test Plans must include an examination of all the manufacturer's stated requirements and procedures for installation, calibration, maintenance, and operations that will

be used by the ballast water management system (BWMS) during each test, as appropriate for the specific test.

(b) Test Plans must also include potential environmental, health, and safety issues; unusual operating requirements; and any issues related to the disposal of treated ballast water, by-products, or waste streams.

(c) For land-based testing, a Test Plan prepared under the ETV Protocol may be submitted (ETV Protocol incorporated by reference, *see* §162.060–5). Otherwise, each Test Plan must be in the following format:

(1) Title page, including all project participants.

(2) Table of contents.

(3) Project description and treatment performance objectives.

(4) Project organization and personnel responsibilities.

(5) Description of the independent laboratory and all test facilities and subcontractors.

(6) BWMS description.

(7) Experimental design (including installation/start-up plan for tested equipment).

(8) Challenge conditions and preparation (including the test facility's standard operating procedures for achieving such conditions).

(9) Sampling, data acquisition, and analysis plan, including all necessary procedures.

(10) Data management, analysis, and reporting.

(11) Quality Assurance Project Plan, in accordance with the requirements of §162.060–36 of this subpart.

(12) Environmental, health, and safety plans.

(13) Applicable references.

§162.060–26 Land-based testing requirements.

(a) Each ballast water management system (BWMS) must undergo land-based tests and evaluations that meet the requirements of the ETV Protocol (incorporated by reference, *see* §162.060–5). The land-based testing will determine if the biological efficacy of the BWMS under consideration for approval is sufficient to meet the applicable ballast water discharge standard (BWDS) and validate those aspects of the operating and maintenance parameters presented by the manufacturer that are appropriate for assessment under the relatively short-term, but well-controlled, circumstances of a land-based test.

(b) The test set up must operate as described in the ETV Protocol Test Plan requirements during at least five consecutive, valid, and successful replicate test cycles. No adjustments to the BWMS are permitted unless specifically detailed in the Operation, Maintenance and Safety Manual. The BWMS must be operated by independent laboratory or independent laboratory subcontractor personnel.

(c) Each valid test cycle must include—

(1) Uptake of source water by pumping at a minimum of 200 m^3/hr;

(2) Treatment of a minimum of 200 m^3 of challenge water with the BWMS;

(3) Pumping of a minimum of 200 m^3 of control water through the test facility in a manner that is in all ways identical to paragraph (c)(2) of this section, except that the BWMS is not used to treat the water;

(4) Retention of the treated and control water in separate tanks for a minimum of 24 hours; and

(5) Discharge of the treated and control water by pumping.

(d) The BWMS must be tested in water conditions for which it will be approved. For each set of test cycles, a salinity range must be chosen. With respect to the salinity of water bodies where the BWMS is intended to be used, the challenge water used in the test set-up must have dissolved and particulate content as described in the ETV Protocol.

(e) The approval certificate issued in accordance with §162.060–10(g) will list the salinity ranges for which the BWMS is approved.

(f) The BWMS must be tested at its rated capacity or as specified in paragraph (f)(1) of this section for each test cycle and must function to the manufacturer's specifications during the test.

(1) Treatment equipment may be downsized for land-based testing, but only when the following criteria are met:

(i) Treatment equipment with a treatment rated capacity (TRC) equal